

# Exhibit 4

IVANNY

Synergy Operating, LLC  
Closed Loop Drilling Impacts  
Rule 50 Comments

Synergy Operating, LLC  
Shallow 1000' Fruitland Coal Calculations  
Closed Loop Analysis  
Cement Calculations

## Hole Calculations

12.25" Hole Size  
8-5/8" Casing Size  
ANNULAR AREA CEMENT CALCULATIONS  
12.25 ID OF HOLE  
8.625 OD OF PIPE  
0.073504 Bbls per Ft  
0.412722 Ft3 per Ft

0.1457625 bbls/ft 12.25" hole

1.42 Cement Yield (ft3 per sack)  
0.290649 Sacks per Ft

120 DEPTH OF CASING  
8.820423 BBLS OF CEMENT 100%  
49.52667 FT3 OF CEMENT NEEDED 100%  
34.87794 SACKS OF CEMENT PER 100%

17.49 bbls of surface hole exact waste  
10 Multiplier Waste 10 times  
174.92 bbls of surface hole waste expected

17.64085 DOUBLED BBLS OF CEMENT  
99.05335 FT3 OF CEMENT (W EXCESS)  
69.75588 SACKS WITH EXCESS

Historical Estimate  
15 bbls surface cement waste expected

7" Hole Size  
5-1/2" Casing Size  
ANNULAR AREA CEMENT CALCULATIONS  
7.88 ID OF HOLE  
5.50 OD OF PIPE  
0.030855 Bbls per Ft  
0.173253 Ft3 per Ft

0.0602386 bbls/ft 7-7/8" hole size

1.39 Cement Yield (ft3 per sack)  
0.124642 Sacks per Ft

1000 DEPTH OF CASING  
30.85539 BBLS OF CEMENT 100%  
173.253 FT3 OF CEMENT NEEDED 100%  
124.6425 SACKS OF CEMENT PER 100%

53.009956 bbls of production hole exact waste  
10 Multiplier Waste 10 times  
530.09956 bbls of production hole waste expected

61.71078 DOUBLED BBLS OF CEMENT  
346.506 FT3 OF CEMENT (W EXCESS)  
249.2849 SACKS WITH EXCESS

Historical Estimate  
15 bbls production hole cement waste expected

Drilling Phase Costs	
Location Size Adjustment & Liner change	1,500
Trucking Charges Mob/Demob	2,000
Solids Equipment (3 days @ \$ 5,000)	15,000
Trucking Solids (8 trucks @ \$ 1,000)	8,000
Solid Waste charges from landfill	2,600
Soil Testing Costs	1,000
Backhoe/Loader w/ operator	1,500
Subtotal through Drilling	31,800
Mob/Demob/Backhoe (Combined)	2,000
Trucking Solids (2 trucks @ \$ 1000)	2,000
Subtotal on Completion	4,000
Grand Total Estimated Impact	35,800

735.01 Total bbls of solid waste @ 22.4 ppg when dry  
4,127.11 cubic feet of solid waste (5.615 ft3 per bbl)  
152.86 cubic yards of solid waste (27 ft3 = 1 yd3)  
7.6 Number of 20 yard trucks to use  
\$ 2,751.40 Cost \$ 18/yd Waste Cost

No NM Gross Receipt Taxes Estimated

Prepared by TEM, 10-27-2007